Https Integration:

I have used a Https Server with Tektelic Network Server.

HTTPS server:

https://messagesaver3000.herokuapp.com

1. Create and Configure the HTTPS Integration on NS:

- Go to Applications -> Select the Application (where devices added)->Select "Manage Integrations"
- Select "+" icon to "Add Integration".
- Then Give name that you want.
- Select "HTTP" as type.
- Select one of the data converters, based on your sensor. In my case, I have selected "Home Sensor".
- Then enter the host name (without http or https prefix) or IP address.
- Then enter the port number. This port number should be opened and listened to https messages. (Make sure this port opened and listened properly on your https server In my case, I have used "443".
- Base Path: you don't need to give this path. Unless you have an Application Server which has directory structure. In my case, I left as it is.
- Select "HTTPS" checkbox to use HTTPS
- Authentication Method: In my case, I do not have any authentication. So, I have used "No authentication". If you have any authentication then select "Basic Authentication" and enter the username and password.
- Request Headers: I haven't used this option.
- Then select "Add" button.

Please see the screenshot below:
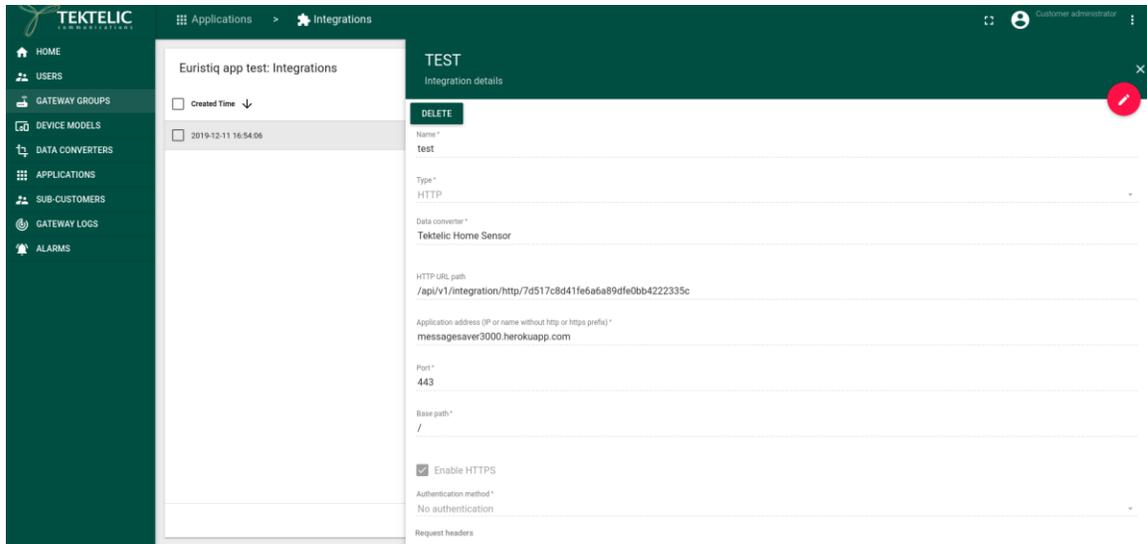
2. Check is downlinks are received by HTTPS server

Trigger sensor to send some data and check is this uplink is received by HTTPS sensor:

https://messagesaver3000.herokuapp.com/list

["{payloadMetaData={applicationMetaData={id={entityType=APPLICATION, id=40bbe290-3e58-11e9-b740-3f45498a159a}, customerId={entityType=CUSTOMER, id=e1298cd0-3059-11e9-8b0d-3f45498a159a}, subCustomerId=null, name=Euristiq app test}, gatewayMetaDataList=[{id={entityType=GATEWAY, id=9b642160-d563-11e9-b191-d9ad92d3bef8}, name=micro, mac=647FDAFFFE0078DE, latitude=3.0, longitude=4.0, altitude=5.0, rxInfo={channel=1, codeRate=4/5, crcStatus=1, dataRate={modulation=LORA, spreadFactor=12, bandwidth=125}, frequency=867300000, loRaSNR=10.0, mac=647fdafffe0078de, rfChain=0, rssi=-54, size=20, time=0001-01-01T00:00:00Z, timestamp=13032708, rsig=null, antenna=0}}], deviceMetaData={id={entityType=DEVICE, id=8fd8daa0-0170-11ea-8b47-7191fd16760e}, name=217, deviceClass=CLASS_A, deviceEUI=647FDA0000000DB8, appEUI=647FDA8010000100}, fcount=19, adr=true, fport=10}, payload={inputCounter=1, input=false}}"]

IMPORTANT: HTTPS server should send response to NS, once it receives payload. Then only you will be able to see payloads continuously from NS.

To clear list of received packets just use this link:
https://messagesaver3000.herokuapp.com/clear

3. Sending Downlink message via HTTPS Integration:

The following tool is required to send downlink message to the Device.

Tool- Insomnia

1. To send Down link, Tektelic Network Server address and HTTP url path (you can find it in HTTP Integration) are required.
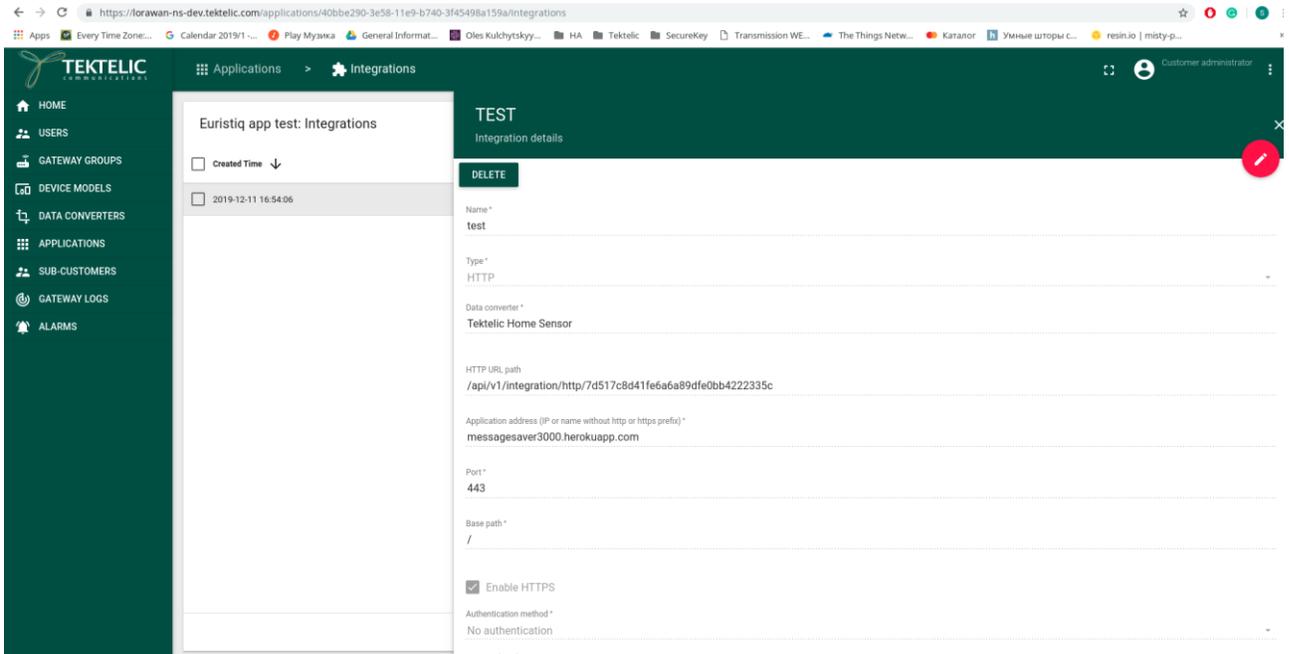
2. Then you can combine NS address and HTTP URL Path like this:
   https://lorawan-ns-dev.tektelic.com:443/api/v1/integration/http/7d517c8d41fe6a6a89dfe0bb4222335c

3. Then you can enter this URL in "Insomnia" and set method as "POST". Then add the body
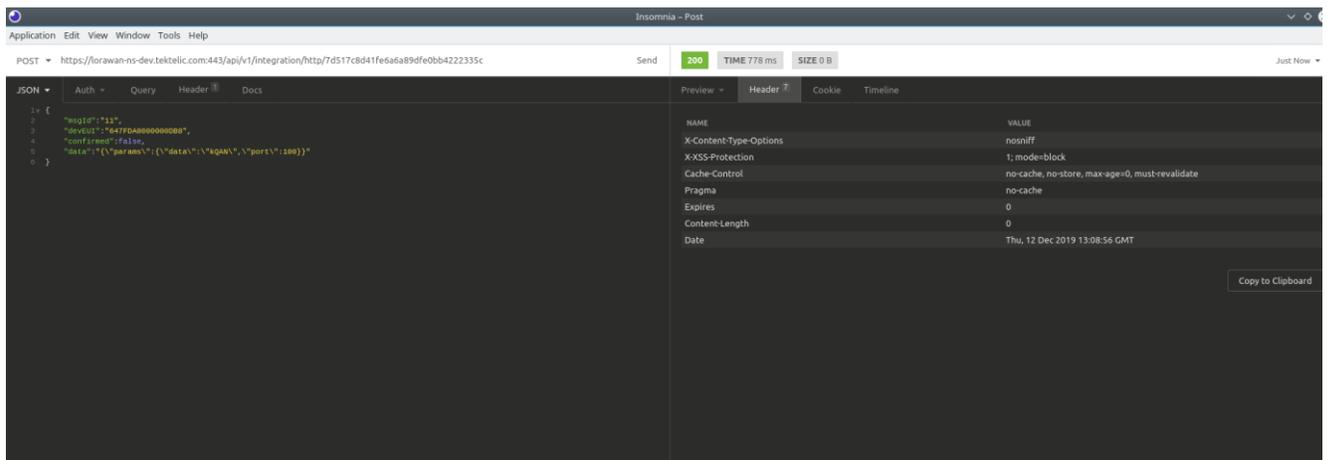
with correct values (JSON type) and select send button. After this the downlink will be sent.

JSON Format:

```
{
  "msgId":"11",
  "devEUI":"647FDA0000000DB8",
  "confirmed":false,
    "data":"{\"params\":{\"data\":\"kQAN\",\"port\":100}}"
}
```

4. You should be able see the Downlink message in Downlink Queue tab.